

CLAIMS

What is claimed is:

1. A system comprising:

a network including a plurality of components; and

a controller coupled to the network and operative to automatically

configure the components of the network to perform a combined

action.

2. The system of claim 1 wherein the controller defines relationships

between the components to configure them to perform a combined action.

3. The system of claim 1 wherein each resource is one of hardware

and software.

4. The system of claim 1 wherein the action includes providing a

network service.

5. The system of claim 1 wherein the controller automatically

configures the network in response to detecting an event.

6. The system of claim 5 wherein the event is generated in response to

automatically detecting increased network usage.

7. The system of claim 6 wherein the network includes a plurality of

resources, the controller assigning additional resources to provide a network

3 service that is already being provided by other resources in response to the
4 event.

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1 8. The system of claim 5 wherein the event is generated in response to
2 the controller detecting demand for a new network service.

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1 9. The system of claim 8 wherein the demand for the new network is
2 issued in response to a command issued by a user of the system.

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1 10. The system of claim 1, further comprising:
2 a console coupled to the controller operative to provide an interface that
3 allows a human user to interact with the controller.

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1 11. A method comprising:
2 logically grouping a plurality of components at a data center into a single
3 meta-server;

4 defining one or more hierarchical relationships between each of said
5 components including one or more associations, dependencies and/or
6 prerequisites, said hierarchical relationships providing information related to
7 network operations at said data center; and

8 using said information for one or more network management functions at
9 said data center.

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1 12. The method as in claim 11 wherein a first one of said defined
2 hierarchical relationships comprise:

3 a first zone or resource collection comprised of a first subset of said
4 plurality of components.

13. The method as in claim 12 wherein a second zone or resource collection of said defined hierarchical relationships comprise:

a second zone comprised of a second subset of said plurality of components.

14. The method as in claim 13 wherein a third one of said defined hierarchical relationships comprise:

an interconnect logically connecting said first zone and said second zone.

15. The method as in claim 12 wherein one of said components grouped within said first zone is a Web server.

16. The method as in claim 13 wherein one of said components grouped in both said first zone and said second zone is a firewall.

17. The method as in claim 11 wherein one of said components is a router.

18. The method as in claim 11 wherein one of said network management functions is to initialize one or more of said system components at said data center and said defined hierarchical relationships between each of said system components is used to determine an appropriate order in which to initialize said one or more components.

19. The method as in claim 18 wherein initializing comprises rebooting one or more of said system components.

1 20. The method as in claim 18 wherein initializing comprises restarting
2 one or more of said system components.

1 21. The method as in claim 18 wherein initializing comprises
2 reconfiguring one or more of said system components.

1 22. A meta-server comprising:
2 a plurality of front end Web servers to process client requests for Web
3 pages;
4 a plurality of back-end servers to perform various back-end processing
5 functions associated with said client requests;
6 a controller to define one or more logical hierarchical relationships
7 between each of said components including one or more associations,
8 dependencies and/or prerequisites, said hierarchical relationships providing
9 information related to network operations at said data center and to use said
10 information for one or more network management functions at said data center.

1 23. The meta-server as in claim 22 further comprising:
2 a firewall communicatively coupled between said front-end Web servers
3 and said back-end servers to analyze and filter data traffic directed towards said
4 back end servers,
5 said controller further defining one or more additional logical hierarchical
6 relationships between said firewall and said front-end and/or said back-end
7 servers.

1 24. The meta-server as in claim 23 further comprising:

6 executing a simulation of said network operations based on said
7 hierarchical relationships between said components.

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1 41. The method as in claim 40 further comprising:
2 storing different groups of said logical hierarchical relationships into one
3 or more tool sets, said tool sets usable for conducting said simulation.

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1 42. The method as in claim 41 further comprising:
2 using results of said simulation to design additional logical hierarchical
3 relationships between said components.

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1 43. The method as in claim 42 wherein designing additional logical
2 hierarchical relationships comprises optimizing said logical hierarchical
3 relationships between said components.

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1 44. The method as in claim 42 wherein said additional logical hierarchical
2 relationships are designed responsive to an inclusion of new components on said
3 network.

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1 45. A network management architecture defined by a series of
2 abstractions comprising:
3 a plurality of network resources;
4 one or more services, each comprised of a specified set of said network
5 resources;
6 a service collection comprised of two ore more services; and
7 a user interface providing information related to and control over said
8 service collection, said services, and/or said network resources to a user.

